04-16-07

AF

PTO/SB/21 (09-06)
Approved for use through 03/31/2007. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission	39

Application Number	08/977,846
Filing Date	November 25, 1997
First Named Inventor	John O. RYAN
Art Unit	3628
Examiner Name	T. Dixon
Attorney Docket Number	549222000101

ENCLOSURES (*Check all that apply*)

- [ ] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment/Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Reply to Missing Parts/ Incomplete Application
  - [ ] Reply to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
- [ ] Request for Refund
- [ ] CD, Number of CD(s) _____
  - [ ] Landscape Table on CD
- [ ] After Allowance Communication to TC
- [X] Appeal Communication to Board of Appeals and Interferences including side tabs (38 pages)
- [ ] Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- [ ] Proprietary Information
- [ ] Status Letter
- [X] Other Enclosure(s) (please Identify below):

  Return Receipt Postcard

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	MORRISON & FOERSTER LLP (Customer No. 25226)		
Signature	NR Klivans		
Printed name	Norman R. Klivans		
Date	April 12, 2007	Reg. No.	33,003

I hereby certify that this paper is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV 582593258 US, on the date shown below in an envelope addressed to: MS Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: April 12, 2007 Signature: Georgina Matos (Georgina Matos)

pa-1147211

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV 582593258 US, in an envelope addressed to: MS Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: April 12, 2007 Signature: Georgina Matos
(Georgina Matos)

Docket No.: 549222000101
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
John O. RYAN

Application No.: 08/977,846 Confirmation No.: 3572

Filed: November 25, 1997 Art Unit: 3628

For: METHOD AND SYSTEM FOR INFORMATION DISSEMINATION WITH USER MENU INTERFACE (AS AMENDED) Examiner: T. Dixon

APPEAL BRIEF - RESPONSIVE TO NOTIFICATION OF NON-COMPLIANT APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Appellant submits this Brief, responsive to the Notification of Non-Compliant Appeal Brief dated March 15, 2007 setting one month to respond.

Real Party in Interest

The real party in interest is the assignee, Command Audio Corp.

Related Appeals and Interferences

None.

Status of Claims

Claims 1 and 33-61 are pending (non-final) and all stand rejected. The rejection of all these claims is appealed here.

Status of Amendments

No amendments were filed subsequent to any final rejection. There are no unentered amendments.

Summary of Claimed Subject Matter

The present claims are directed to a system, also characterized as a receiver, and its associated method of operation, which permit the user to listen to the specific content of information (such as audio programs) received when and where he or she wants to, see specification page 2, lines 22-25.

This can be characterized as a radio (or television) "on demand" system, with local storage at the user's receiver of a variety of transmitted audio (radio) or video (TV) programs. While routine now (such as "TiVo" type personal video recorders), such devices did not exist as of the effective filing date of this application.

The inventive receiver, in Fig. 1 system 10, is for receiving information, for instance radio or television broadcast signals, as received at antenna 11. The receiver further includes a tuner 12 which is a radio or television or other type of tuner that extracts information, e.g., digitized alphanumeric data or compressed audio data, from the transmitted signal received at antenna 11. As explained in the specification at page 2, lines 29 and following, the information may be extracted from, e.g., the vertical blanking interval of a received television station video

signal, the separate audio program (SAP) signal from a television station audio signal, or from radio sidebands (subcarriers) which include an FM subcarrier of an FM radio broadcast signal or from a dedicated channel.

The conditional access circuitry 16 in Fig. 1 may be used to decrypt the previously encrypted digitized alphanumeric data or audio data, if it is broadcast in encrypted form. The extracted data (e.g., programs) are stored in a random access or other type memory 28, see specification at page 3, lines 1-4.

A user interface (control) 40 in Fig. 1 is included, which can be manual (e.g., buttons or key pad) or voice control. This user interface 40 accesses a hierarchy of user menus, in some embodiments, which allow a user to access the stored information by indicating his selections from the menus, see page 3, lines 4-8. The stored programs in the memory 28 are organized in the form of a database of the received and stored programs, see page 3, line 8. A speech producing device, including a decompression system 39 and a digital analog converter (D/A) 30 in Fig. 1 or other speech producing device, converts the encrypted digitized audio information to an analog audio signal for provision to the user via a loud speaker or earphones 38 in Fig. 1.

Hence Claim 1 recites the tuner, memory, user interface, set of menus, database, accepting selections from the set of menus, a controller for selecting data from the database, and a speech producing subsystem. The claimed controller reads on microcontroller 20 in Fig. 1 to which the user interface is coupled and which controls the conditional access circuitry 16 and the memory 28.

The associated method of operating such a receiver is recited in method Claim 58.

Reading of the Claims on the Specification and Figures

The following further reads elements of the claims on the specification; this is specifically not intended for purposes of construing the claims or to be limiting or exhaustive, but merely to illustrate how the claims may be read on embodiments in the specification. The receiver of Claim 1 is illustrated in one embodiment in Fig. 1 at 10. The transmitted broadcast signal in the preamble of Claim 1 is received on antenna 11. The source of the broadcast signal is shown in Fig. 2 at 54 as being transmitted from transmitter 53 by the existing radio station or television station also shown in Fig. 2. The tuner of Claim 1 first clause reads on tuner 12 in Fig. 1. The memory of Claim 1 second clause reads on memory 28 which is coupled via intervening conditional access circuitry 16 to tuner 12. The memory 28 stores the data in the received broadcast signal in a database not shown in Fig. 1.

The user interface in the third clause of Claim 1 reads on user interface 40 in Fig. 1. The menus recited in the "user interface" clause of Claim 1 are not shown in the figures. The controller recited in the fourth clause in the body of Claim 1 reads on the microcontroller 20 in Fig. 1 which is coupled to the memory 28 via the control line 22. The microcontroller 20 is also coupled to the user interface 40 as recited in the fourth clause of Claim 1, by line 42 in Fig. 1.

The speech producing sub-system of the fifth clause of Claim 1 reads on at least the decompression circuitry 39, digital to analog converter 30, amplifier 36 and loud speaker 38 in Fig. 1. These are coupled to the microcontroller via for instance line 47 and as shown to the memory 28 via line 43. Converting the selected data from digital form to analog signal in the final clause of Claim 1 reads on, for instance, the digital analog converter 30 in Fig. 1.

In terms of reading the specification on Claim 1, in the preamble the receiver reads on the description of Fig. 1 at page 4, lines 11 to 12. The broadcast signal in the preamble of Claim 1 reads on page 4, line 17. The broadcast signal reads on page 4, lines 19 and 20.

In the first clause of Claim 1, the tuner reads on page 4, line 20. The memory in the second clause of Claim 1 reads on page 5, line 7. The database in the second clause of Claim 1 reads on page 6, line 19.

The user interface in the third clause of Claim 1 reads on page 6, lines 15-17. The controller in the fourth clause of Claim 1 reads on page 5, line 2. The "selecting data from the database in response to the accepted selections and providing the selected data in a digital form" in the fourth clause of Claim 1 reads on the specification at page 5, lines 25-31. The "set of menus" reads on page 6, line 21.

The speech producing sub-system in the final clause of Claim 1 reads on page 6, lines 9-14 and page 7, line 34 through page 8, line 2.

As regards independent Claim 58, this reads in large part on Fig. 1 in parallel with Claim 1. The first step in the body of Claim 58 of receiving the information reads on the antenna 11 and tuner 12 of Fig. 1. The second step of storing the received information in a database reads on the conditional access circuitry 16 with the database being stored in memory 28 in Fig. 1. The third step of providing a set of menus describing the database reads on the microcontroller 20. The fourth step of accepting selections from the set of menus reads on the user interface 40 in Fig. 1. The fifth step of selecting data from the database in response to the accepted selection reads on the microcontroller 20 in Fig. 1 connected by line 22 to memory 28. The sixth step of providing selected data in digital form reads on reading out the data from memory 28. The

seventh step of converting selected data to an analog signal reads on at least in part in the digital to analog converter 30 in Fig. 1.

The "method" in the preamble of Claim 58 reads on the specification page 2, line 22. The information dissemination in the preamble of Claim 58 reads on page 2, line 25. The first step in the body of Claim 58 of receiving information reads on page 4, line 17. The second step of Claim 58 of storing the received information in a database reads on page 6, line 19. The third step of Claim 58 of providing a set of menus describing the database reads on page 6, lines 20-23.

The fourth step of Claim 58 of accepting selections from the set of menus reads on page 6, lines 20-22. The fifth step of Claim 58 of selecting data from the database in response to the accepted selections reads on page 5, lines 25-31. The sixth step of Claim 58 of providing the selected data in digital form reads on page 6, lines 9 and 10. The seventh step of Claim 58 of converting the selected data to an analog signal reads on page 8, lines 18-20 and page 6, lines 9-12.

Grounds of Rejection to be Reviewed on Appeal

The Examiner in the Office Action of June 7, 2006 rejected all pending Claims 1 and 33-61. (Claims have been twice rejected, although the rejection was non-final so an appeal is in order.) First, the Examiner indicated that certain recitations in the claims were not effective as limitations, referring to "set of menus" and "database".

Additionally, the Examiner rejected the Claims 1, 33-39, 41-44, 52 and 56 under §102 as anticipated by DeBey.

Claims 1, 33-37, 49, 52, 54-56, and 58-59 stand rejected under §102 as anticipated by Lang.

Claims 1, 33, 36-37, 39-40, 51, 54-56 and 58-59 stand rejected under §102 as anticipated by Yoshio.

Various dependent claims stand rejected under §103 citing the above references in addition to Rovira and Official Notice: Claims 39 and 40 stand rejected under §103 citing DeBey and Yoshio. Claims 38, 41-44 and 52 stand rejected under §103 citing Yoshio and DeBey. Claims 38 and 41-42 stand rejected under §103 citing Lang or Yoshio in view of Rovira. Claims 45-51, 53, and 57 stand rejected under §103 citing DeBey and Official Notice. Claims 45-51, 53, and 57 stand rejected under §103 citing Yoshio and Official Notice. Claims 39-40, 45-48, 50-51, 53 and 57 stand rejected under §103 citing Lang and Official Notice.

Argument

The "Detailed Argument" below deals with these issues in the following order:

1. The limitations "set of menus" and "database" are structural and cannot be disregarded by the Examiner. They do distinguish over the references.

2. DeBey does not anticipate or make obvious the claims.

3. Lang does not anticipate or make obvious the claims.

4. Yoshio does not anticipate or make obvious the claims at least because Yoshio is non-enabling and hence does not meet the requirements for a reference.

5. At least some dependent claims are separately patentable.

Summary of Why the Rejections are Legally and Factually Deficient

The two independent claims are apparatus Claim 1 and method Claim 58. Claim 1 stands rejected under §102 citing DeBey and Lang. Claim 58 stands rejected under §102 citing Lang. Claims 1 and 58 stand rejected under §102 citing Yoshio.

DeBey Rejection

The §102 rejection of Claim 1 citing DeBey is improper and factually wrong, at least because DeBey does not disclose any menu, or any database, or any set of menus, and does not use menus for selecting data from the database, all recited in Claim 1.

Further this rejection is legally wrong since the relevant Declaration under Rule 132 was not given proper consideration or weight, see the First Declaration under Rule 132 of Charles H. Jablonski, filed March 8, 2006, paragraphs 4-9 of record (also see Evidence Appendix to this paper), establishing that these features are lacking in DeBey. Mr. Jablonski is an expert in the field, see his Exhibit 1. Mr. Jablonski is a paid expert in this matter.

The Examiners' June 7, 2006 rejection ignored the facts established in the First Declaration pertaining to DeBey. This is a legal error since Rule 132 declarations are entitled to consideration as establishing facts attested to therein. The Examiner provided no factual evidence contravening or rebutting the facts established in the First Declaration.

Lang Rejection

The Lang rejection is similarly improper both factually and legally. Lang is deficient in essentially the same ways as DeBey, see the First Declaration, paragraphs 12-14 so this rejection is also prima facie inadequate.

As established in the First Declaration, paragraph 12, the Lang device is an improved video cassette recorder (VCR). Lang does not disclose a menu describing a database, much less a set of menus, see First Declaration, paragraph 13.

Hence in Lang there is no database, no menu to select data, no set of menus, and no selecting data from the database using menus, all in the claims, see First Declaration, paragraph 13.

The Examiner ignored the facts established in the First Declaration as pertain to Lang. This is a legal error similar to that committed by the Examiner with respect to the DeBey rejection.

Yoshio Rejection

Yoshio (also referred to as "Yoshio et al" and "Yoshiro et al".) is not enabling of the claimed invention and hence as a matter of law cannot support a §102 rejection. See the Second Declaration under Rule 132 of Charles H. Jablonski at paragraphs 3, 4, 5 and 6, also of record. The Examiner ignored this Second Declaration, and also ignored the legal significance of a reference not being enabling and hence not anticipatory. Thus he made a factual error in regards to Yoshio being non-enabling and a legal error in not considering the Second Declaration.

Yoshio does not anticipate the claims as a matter of law because, inter alia, Yoshio is not an enabling disclosure of the claimed invention, see the Second Declaration, paragraphs 3, 4, 6 and 7.

The Examiner ignored all this. As a matter of case law, lack of enablement in a reference means that the reference is not able to defeat novelty, that is to anticipate. Yoshio, not being an issued patent, enjoys no presumption of enablement or validity or operability.

Even if Yoshio were regarded as enabling of the invention by the Examiner, Applicant rebutted his understanding by the facts established in the Second Declaration.

Detailed Argument

1. "Set of Menus" and "Database" are Structural

The Examiner at page 2 of the June 7, 2006 Action indicated that he ignored certain claim limitations as being "non-functional descriptive material" that cannot distinguish the claimed apparatus over the references. The Examiner characterized both the terms "set of

menus" and "storing data in the received broadcast signals in a database" as being such limitations. The Examiner cited at page 3 *In re Danly* and *Ex Parte Masham* in support of this position. It is respectfully submitted that the Examiner misconstrued the law, did not comply with MPEP, and also did not properly apply these cases.

First, the Examiner cited *In re Danly*, 263 F.2d 844 (C.C.P.A. 1959) for the rule that an apparatus claim must distinguish over a reference in terms of structure rather than merely function. That rule, if it is one, of *Danly* does not govern this appeal, however, because, first, the limitations here are not purely functional, unlike those that failed in *Danly*, but do recite additional structures that distinguish over the references, and second, *Danly* permits structure to be implied in recited functions and so to distinguish over prior art.

The claims *Danly* found wanting were directed to a power press structure in which tie rods were insulated from the frame "such that alternating current may be passed through the tie rod to heat the same." (Emphasis added here.) The cited references disclosed press structures with insulated tie rods, but not passing an alternating current through them. The court noted that "the quoted expression does not constitute a structural limitation since an alternating current *may* be passed through any tie rod which is insulated from the press frame." 263 F.2d at 847 (original emphasis). As a result, it added nothing to the press structure already recited and left the claim indistinguishable from prior art.

In contrast, the court in *Danly* upheld other apparatus claims that contained functional limitations that were less equivocal and *did* serve to distinguish the prior art:

> [Applicant] has used such phrases as "for holding" and "for insulating" throughout the appealed claims with the obvious intention of limiting them to actual performance of the stated functions, as distinguished from mere possibility of such performance, and no objection to such use has been made by the Patent Office tribunals, nor has any rejection of the appealed

> claims been based on indefiniteness or inferential recitation. Under such circumstances, we think claims 3 through 7 should be construed as being limited to an apparatus in which alternating current is actually applied to the tie rods, and our allowance of those claims is based on that interpretation." *Ibid.*

The real rule of *Danly* is that functions, when tied to structure in the claims, are permissible limitations and can distinguish over prior art.

In the present case, Applicant respectfully submits that the terms "set of menus" and "database" are in fact well understood in the art as structural elements, not functions. See First Declaration of record, paragraph 11. Note the Declarant's extensive expertise in the television/video/communications fields, see Exhibit 1 to the First Declaration. The Declarant's experience in working with many others in these fields over the years gives him authority for indicating meanings of these terms to those skilled in these fields. As will be shown, these structural elements required by the claims distinguish over the cited references.

However, even if the phrases that contain "database" and "set of menus" were regarded as functional because they use words such as "for storing" "for providing, "and "for accepting," nevertheless, the intention here is no less obvious than where similar phrases were used in *Danly* to limit the claims to the actual performance of the stated functions. Thus, for example, in Claim 1, "a memory . . . for storing data in the received broadcast signals in a database" is not satisfied by just any memory, so long as it *could* conceivably store the data in a database; instead the claim requires that the data is *actually* stored in a database, that is, that the apparatus contains a database. As in *Danly*, these phrases thereby distinguish over the prior art.

The Examiner also cited *Ex Parte Masham* 2 USPQ 2d 1647 (Board of Patent Appeals and Interferences 1987) for the rule that a claim limitation directed to how the apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if

the prior art apparatus teaches all structural limitations of the claim. The actual statement in *Masham* is:

> At any rate, a recitation with respect to the material intended to be worked upon by a claimed apparatus does not impose any structural limitations upon the claimed apparatus which differentiates it from a prior art apparatus satisfying the structural limitations of that claimed.

Masham continues:

> Similarly, a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the structural limitations of that claim. (Emphasis added here.)

That is not the case here. The present appealed claims do not refer to the workpiece being operated on, or merely the manner in which the apparatus is used. Instead, "database" and "set of menus" are directed to structures in which an act is carried out by the apparatus.

Moreover, even if *arguendo* the present claims included functional limitations, the Examiner is not permitted to ignore them. The first paragraph of MPEP 2173.05(g) states "Functional language does not, in and or itself, render a claim improper." Instead "A functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. A functional limitation is often used in association with an element, ingredient, or step of a process to define a particular capability or purpose that is served by the cited element, ingredient or step."

This is not to concede that the present claims include functional limitations, but even if they did this is not problematic under the law or MPEP.

See also MPEP 2114 indicating that apparatus claims must be structurally distinguishable from the prior art. However, as pointed out above, the cases relied upon by the Examiner are not the same or even similar in terms of the facts as the present appealed claims. For instance, as

stated in MPEP 2114, one may find anticipation of a claimed apparatus because the claims at issue were found to be inherent in the prior art reference. That is clearly not the case here.

As pointed out above, the Examiner is required to give full patentable weight to all limitations in the claims. The present claims do not include "non-functional elements" or merely descriptive elements.

Hence the mere fact that a reference might include, for instance, a tuner, memory, user interface controller and speech subsystem does not result in that reference meeting the present claims, as set forth in detail below discussing the particular rejections.

2. DeBey Does Not Meet Claims 1 and 58

DeBey discloses a video-on-demand system for distributing cable television programs to users, see Abstract. The user's special receiver (see Fig. 2) includes memory components 42, 46 which store the received video program packets or segments for later viewing (see page 17, second paragraph.)

Specifically, it is clear that DeBey does not disclose any menus or any database, or any set of menus and does not use menus to select items stored in the database. See the First Declaration, paragraphs 4-9 establishing this. DeBey only stores part of one video program at a time in his memory, or he stores a single data packet of each of several video programs. See First Declaration, paragraphs 5-7. In any case, in DeBey there is no menu and there is no database and no selection from the stored items using the menu. See First Declaration, paragraphs 8-9.

Hence clearly DeBey fails to disclose or suggest at least (see Claim 1) "storing data in the received broadcast signal in a database;" and "a set of menus describing the database" and "accepting selections from the set of menus" and further, "selecting data from the database in

response to the accepted selections." Moreover, since DeBey has no need for a database or menu or menus given the nature of his receiver's very limited memory storage capacity, DeBey does not even suggest anything that would render obvious the present claims, see First Declaration, paragraph 10.

Independent Claim 58 recites similar aspects as Claim 1 and similarly distinguishes over DeBey.

Hence each of present independent Claims 1 and 58, and all claims dependent therefrom, distinguish over DeBey.

3. Lang Does Not Meet Claims 1 and 58

Lang is deficient in essentially the same ways as DeBey. See the First Declaration, paragraphs 12-14.

As set forth in the First Declaration, paragraph 12, the Lang device is an improved video cassette recorder (VCR). Lang does not disclose a menu describing or accessing the stored video material, much less a set of menus. See First Declaration, paragraph 13. There is a single use of the term "menu" in Lang at col. 6, lines 63-68. However, this is not a menu that describes the content of stored data. Instead Lang merely provides a display described as a "menu" which shows a list of desired "frame numbers" of the program material stored on the VCR tape. See First Declaration, paragraph 12. Since Lang's device is VCR-based, it necessarily records the video on the tape in strictly sequential fashion; hence the frame numbers since video conventionally is organized by frames. There is no similarity between the list of frame numbers in Lang and the menus in the present claims. It is clear that the "frame numbers" are not a list of items descriptive of the content of the database, any more than a list of the page numbers of a book indicates what is written on them. Instead the Lang frame numbers merely represent the

frames of a particular stored video program, as is typical of VCR recording on video tape. Further, Lang does not describe how the stored video program segments themselves are identified to a user in his VCR system.

Hence in Lang's VCR apparatus there is no database, no menu to select programs, no set of menus, and no possibility of selection from stored programs using the set of menus, see First Declaration paragraph 13.

Hence Lang also does not meet the present claims nor does Lang render them obvious, see First Declaration, paragraph 14.

Hence each of present independent Claims 1 and 58, and all claims dependent therefrom, distinguish over Lang.

4a. Status of Yoshio.

It is respectfully submitted that the Yoshio reference (also referred to as Yoshio et al.), also cited by the Examiner as meeting the present independent claims, does not anticipate the claims as a matter of law because, inter alia, Yoshio is not an enabling disclosure. See the Second Declaration of record, paragraphs 3, 4 and 6. Yoshio is a published unexamined Japanese patent application (Kokai). See Second Declaration, paragraph 5. Japanese patent attorneys representing the assignee of this application have verified to the undersigned that the Yoshio application was never even examined. As is well known, in Japan a request for examination must be filed by the patent applicant or the application is not examined. According to the Japanese Patent Office database, the Yoshio Japanese patent application was never examined and is deemed to have been withdrawn. No official action was ever issued nor any response filed. It is a matter of public record that no patent in Japan or elsewhere ever issued from or claiming priority to Yoshio. Clearly, no patent will ever issue from the Yoshio

application now given the passage of time. It is not believed that any foreign counterpart applications to Yoshio were ever even filed.

4b. Lack of Enablement in a Reference—Law - Yoshio

An applicant for a patent bears the burden of introducing evidence that a reference applied by the USPTO lacks an enabling disclosure. Evidence to such effect may be introduced into the record by means of an affidavit or declaration pursuant to 37 CFR §1.132, as has been done here.

A prior art publication must be enabling in order to defeat novelty, that is to be anticipating. See, for instance, *Transclean Corp. v. Bridgewood Services, Inc.*, 290 F.3d 1364, 62 USPQ 2d 11865 (Fed. Cir. 2002). In order to anticipate, the reference must enable one of skill in the art to make and use the claimed invention. In other words, to be prior art under §102, a reference must put the anticipating subject matter at issue in the possession of the public through an enabling disclosure. See *Akzo NV v. U. S. International Trade Commission*, 808 F.2d 1471, 1479, 1 USPQ 2d 1241, 1245 (Fed. Cir. 1986). Further, a prior art publication must contain within its four corners sufficient description to enable a person of ordinary skill in the art to make the invention without an unreasonable amount of experimentation. See for instance, *Advanced Display Systems, Inc. v. Kent State University*, 212 F.3d 1272, 1282, 54 USPQ 2d 1673, 1679 (Fed. Cir. 2000).

If the USPTO cites a prior art disclosure that anticipates the claims, the burden of proof shifts to the applicant to rebut a presumption that the disclosure is operable. If the applicant makes a *prima facia* case that the prior art reference is inoperable, the burden shifts back to the PTO to show through prior art or otherwise that the reference is enabling. See *In re Sasse*, 629 F.2d 675, 207 USPQ 107 (CCPA 1980).

4c. Yoshio Is Not Enabling and So Does Not Meet Claims 1 and 58

Yoshio, not being an issued patent, does not enjoy any presumption of validity. Moreover, since Yoshio is only a Kokai and not an issued patent, much less a U.S. issued patent, there is no presumption that it is operable and/or enabling. Even if it were, by filing the Second Declaration, Applicant rebutted any presumption that the Yoshio disclosure is of an operable apparatus.

As established in the Second Declaration, paragraph 6, the Yoshio disclosure is very sketchy in terms of technical detail. The Yoshio figures and text are lacking in terms of the internal components and operation of the apparatus, except for the very general disclosure that it is based on an optical recording disc drive and receives a television signal. See Second Declaration, paragraphs 3-4.

The Yoshio receiver has as its storage element a "rewritable optical disk", see translation page 25, first full paragraph, also referred to as a "magneto-optical disk" at page 27, last paragraph. Yoshio does not describe at all how such a disk stores the recorded material in a way to allow the user to later access it via the menus disclosed at page 28, last paragraph. Instead, it appears that what might occur is that the received material would be stored sequentially on the disk, and any playback would be a simple sequential playback of all the material on the disk in the order it was recorded. The Yoshio disclosure therefore is limited to user functionality, not describing how the actual apparatus is built or operates. As further established in the Second Declaration, the description in Yoshio is more a wish list of desired functionality than enabling of any actual apparatus, see Declaration paragraph 6.

As a result, the absence of enablement and operability of Yoshio removes it from being available to cite against the present claims for anticipation, so Claims 1 and 58 distinguish thereover.

Non-Obviousness - Claims 1 and 58

Although the Examiner did not reject independent Claims 1 and 58 as being obvious, it is respectfully submitted that the claims distinguish over the present references even in combination with other references. This is because as pointed out above, at least, DeBey, Lang and Yoshio each lack essential elements of Claims 1 and 58, which are not made good by the other references.

5a. Claim 33 is Separately Patentable

The Examiner rejected Claim 33 on three grounds: as anticipated by DeBey referencing DeBey page 7, lines 1-33 and page 11, lines 12-15 (see Action page 4); as anticipated by Lang referencing Lang column 8, lines 27-33 (see Action page 6); and as anticipated by Yoshio referencing Yoshio page 23, lines 19-26 (see Action page 7). All these rejections are traversed.

DeBey at the passages cited by the Examiner on pages 7 and 11 does not explain or suggest how much of the data is stored. The most relevant portion appears to be page 7, lines 10-25 of DeBey, but even this is not clear on this point. Hence, DeBey fails to meet Claim 33 which recites "the memory stores the entire database".

As to Lang column 8, lines 27-33, the description there of the "video library" refers to storage of the video programs at the transmitter or head end, not in the user's receiver memory. In fact, this passage of Lang actually suggests that only one program at a time can be stored in the receiver memory. Hence clearly Lang does not meet Claim 33.

As to Yoshio page 23, as pointed out above, Yoshio is not enabling and hence not available for this rejection. Moreover it is respectfully submitted that this passage of Yoshio, in fact, does not meet Claim 33 because the description in Yoshio is merely of what is "temporarily recorded", suggesting possibly some sort of buffering in memory. Hence Yoshio also does not meet Claim 33, and so Claim 33 is separately patentable over the references.

5b. Claim 51 is Separately Patentable

The Examiner rejected Claim 51 on three grounds: as being unpatentable over DeBey in view of official notice (see Action page 12); as unpatentable over Yoshio in view of official notice (see Action page 14); and as being unpatentable over Lang in view of official notice (see Action page 16 and page 18). However with regard to the first two rejections reciting DeBey and Yoshio with official notice, the Examiner gives no detail. He explicitly does not mention Claim 51 in connection with DeBey or Yoshio in his detailed rejection.

Moreover as regards the rejection of Claim 51 citing Lang and official notice for which the Examiner does give detail (see bottom of page 17 carrying over to top of page 18), the use of hierarchical databases as being known in the art is based only on official notice. It is assumed that the same reasoning applies to the rejections of Claim 51 citing DeBey and Yoshio.

It is not disputed hierarchical databases per se were well known at the time of the present invention. However, this was in the context of computers and computer software. It was not known in the context of local storage of broadcast radio or television content. Note that, first, no one had earlier contemplated local storage in a receiver accessible by a user of a large number of radio or television programs. As pointed out above, generally only one program or a very small part of a few programs is stored in the receiver in the references cited by the Examiner. No one had conceived of storing a large number of such programs at the receiver. Hence the use of a

database, much less a hierarchical database, with its attendant sophistication in terms of data access was not known in this context. Moreover the Examiner cites no motivation for the combination of the hierarchical database with the teachings of the other references except that hierarchical databases were well known in the "database arts."

However it is respectfully submitted that no cited references disclose or suggest that hierarchical databases were known in the television/radio field at the relevant time, and this field is equally or more pertinent. Hence this rejection, it is respectfully submitted, is inadequate at least because the Examiner did not provide the motivation why hierarchical databases would be applied in the present situation, nor did he cite any reference suggesting any motivation for same. Hence Claim 51 is separately patentable for at least this reason.

5c. Claim 57 is Separately Patentable

Somewhat similar to Claim 51, the Examiner rejected Claim 57 on three grounds: DeBey and official notice; Yoshio and official notice; and Lang and official notice. Claim 57 calls for "a speed of transmission of the data in the broadcast signal is varied to most efficiently use available bandwidth." The Examiner, essentially identically in each of these three rejections of Claim 57, stated "Official notice is taken that it is old and well known in the network arts to vary transmission speeds to most efficiently used available bandwidth." (Emphasis added.) Even if this is accurate, the next sentence of the Examiner is contradictory to the first sentence where he stated "Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to vary the transmission of the broadcast signal to most efficiently used available bandwidth." (Emphasis added.)

A broadcast signal in radio or television is not the same as a computer network data transmission. While it may be known to vary transmission speeds for instance in a computer

network, this is not done in broadcast radio or television, because the conventional radio/TV receivers have no means of coping with same. This is at least because prior art receivers have no storage capability. Instead they merely reproduce the signal for listening or viewing as it is received in real time, and so the content must be broadcast in real time, not at varying speeds.

Hence first the Examiner's rejection makes no sense since it is internally inconsistent. Further, the Examiner did not settle on what he believes is the relevant field of art, networks in the sense of computer networks, or transmission of broadcast signals in the sense of radio or television. Hence clearly there is no link here between the (allegedly) known varying of transmission speeds from official notice and its application to the present technical problem, or to use it in combination with the teachings of the three cited references. Thus it is respectfully submitted that Claim 57 is separately patentable for at least this reason over all three rejections.

5d. Claims 60 and 61 are Separately Patentable

Claims 60 and 61 recite essentially the same subject matter, and are respectively dependent on Claims 1 and 58. Representative Claim 61 recites "the stored information includes the content of at least one entire program." The Examiner's sole rejection of Claims 60 and 61 cites Yoshio as anticipating these claims, referencing Yoshio page 26, lines 14-20 (see Action page 9). It is respectfully submitted that this rejection is not well founded. First, as pointed out above, Yoshio is not available for anticipation due to its lack of enablement.

Further even if *arguendo*, Yoshio in general was regarded as enabling for what it discloses, it is not seen why this passage of Yoshio meets Claim 60. The description in Yoshio is of the receiver storing information such as a weather forecast or stock market information or music, dramas, entertainments or English courses, as well as news, see last paragraph on page 26. [Note that the Yoshio specification is present in its entirety in the translation earlier provided

to the PTO, in spite of the page numbering.] There is no disclosure in this passage of storing an entire program. For instance, a weather forecast or stock market information is not a "program" as normally understood. Hence it is respectfully submitted that Yoshio fails to meet Claims 60 and 61, even if regarded as enabling, and so Claims 60 and 61 are separately patentable thereover.

Claims Appendix (Attached)

Evidence Appendix (Attached)

Copies of First and Second Jablonski Declarations, entered into this case March 8, 2006.

Related Proceedings Appendix

(None)

CONCLUSION

It is respectfully submitted that, first, all limitations of the present claims are relevant and entitled to patentable weight and should be given same. Moreover, the present claims clearly are not anticipated or rendered obvious by DeBey or Lang even in combination with the other references. Further, the Yoshio reference is not appropriate for an anticipation rejection since Yoshio is not enabling. (This is not to concede that even if Yoshio were enabling it would anticipate.)

Therefore, it is requested that the Board reconsider all of the rejections as pointed out above, reverse them, and instruct the Examiner to pass this case to issue.

In the event that the USPTO determines that an extension and/or other relief is required, Appellant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this paper to Deposit Account No. **03-1952** referencing Docket No. **549222000101**.

Dated: April 12, 2007

Respectfully submitted,

Norman R. Klivans
Registration No. 33,003
MORRISON & FOERSTER LLP
755 Page Mill Road
Palo Alto, California 94304-1018
(650) 813-5850

CLAIMS APPENDIX

TITLE: METHOD AND SYSTEM FOR INFORMATION DISSEMINATION WITH USER MENU INTERFACE (AS AMENDED)
By: John O. RYAN
U.S. Serial No.: 08/977,846
Attorney Docket No.: 54922-20001.01

Claim 1: A receiver adapted to receive data contained in a transmitted broadcast signal comprising:

a tuner for receiving a broadcast signal;

a memory coupled to the tuner for storing data in the received broadcast signal in a database;

a user interface for providing a set of menus describing the database, and for accepting selections from the set of menus;

a controller coupled to the memory and the user interface for selecting data from the database in response to the accepted selections and providing the selected data in a digital form; and

a speech producing sub-system coupled to the controller and the memory for converting the selected data from digital form to an analog signal.

Claims 2-32 (canceled)

Claim 33: The receiver of Claim 1, wherein the memory stores the entire database.

Claim 34: The receiver of Claim 1, wherein the memory comprises a combination of a volatile RAM memory and a non-volatile memory.

Claim 35: The receiver of Claim 34, wherein the non-volatile memory is selected from the group consisting of an audio tape, a magneto-optical mini-disk, a magnetic disk or an optical disk.

Claim 36: The receiver of Claim l, wherein the received data is audio data that has been converted from analog form to digital form.

Claim 37: The receiver of Claim 36, wherein the received audio data is digitized and has been compressed.

Claim 38: The receiver of Claim 36, wherein the received audio data has been encrypted.

Claim 39: The receiver of Claim 1, wherein the received data is alphanumeric data that has been converted from analog form to digital form.

Claim 40: The receiver of Claim 39, wherein the alphanumeric data is converted to voice data by a speech synthesizer.

Claim 41: The receiver of Claim 1, wherein the data is in digital form, has been encrypted and compressed, and further comprising a decryptor for decrypting the data.

Claim 42: The receiver of Claim 41, wherein said system has a decompression algorithm to decompress data that has been compressed at a transmitter prior to being broadcast.

Claim 43: The receiver of Claim 41, wherein the decryptor is enabled by a key received by the tuner.

Claim 44: The receiver of Claim 41, wherein the decryptor is enabled by a key device operatively connected to the decryptor.

Claim 45: The receiver of Claim 1, wherein the user interface is voice activated.

Claim 46: The receiver of Claim 1, wherein the user interface includes:

a manual input device adapted to be mountable on an automobile steering wheel; and

a link from the manual input device to the controller.

Claim 47: The receiver of Claim 1, wherein the user interface includes a control for determining a speed at which the speech producing sub-system outputs the analog signal.

Claim 48: The receiver of Claim 1, wherein the tuner channel skips to tune to a particular transmitter.

Claim 49: The receiver of Claim 1, further comprising:

an amplifier connected to the speech producing sub-system for amplifying the analog signal; and

means for converting the amplified signal to sound.

Claim 50: The receiver of Claim 1, further comprising means for connecting the receiver to an automobile radio set.

Claim 51: The receiver of Claim l, further comprising means for designating by a broadcaster of the broadcast signal a hierarchy for the database.

Claim 52: The receiver of Claim 1, wherein the memory stores the data received in a random access memory up to the capacity of the random access memory before transferring said data to one of a disk medium or a tape medium.

Claim 53: The receiver of Claim 52, wherein the tape medium is a digital audio tape.

Claim 54 : The receiver of Claim 52, wherein the disk medium is a magnetic disk.

Claim 55: The receiver of Claim 52, wherein the disk medium is a magnetic-optical disk.

Claim 56: The receiver of Claim 52, wherein the disk medium is an optical disk.

Claim 57: The receiver of Claim 1, wherein a speed of transmission of the data in the broadcast signal is varied to most efficiently use the available bandwidth.

Claim 58: A method for information dissemination comprising the acts of:

receiving the information;

storing the received information in a database;

providing a set of menus describing the database;

accepting selections from the set of menus;

selecting data from the database in response to the accepted selection;

providing the selected data in digital form; and

converting the selected data to an analog signal.

Claim 59: The method of Claim 58, wherein the received information is transmitted by a broadcast signal.

Claim 60: The receiver of Claim 1, wherein the memory is sufficient to store data representing the content of at least one entire program.

Claim 61: The method of Claim 58, wherein the stored information includes the content of at least one entire program.

EVIDENCE APPENDIX

Docket No.: 549222000101
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
John O. RYAN

Application No.: 08/977,846

Confirmation No.: 3572

Filed: (Intl.) November 25, 1997

Art Unit: 3639

For: METHOD AND SYSTEM FOR INFORMATION DISSEMINATION WITH USER MENU INTERFACE

Examiner: M. Dinh

FIRST DECLARATION UNDER RULE 132

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

1. My name is Charles H. Jablonski. My qualifications are attached as Exhibit 1. I am an independent consultant.

2. I reviewed the specification and currently pending claims of U.S. Patent Application No. 08/977,846 filed November 25, 1997 titled "Method and System for Information Dissemination with User Menu Interface," inventor John O. Ryan. I also reviewed the Office Action in that application having a mailing date of December 13, 2005. I also reviewed the two references cited in that Office Action, DeBey WO99/03112 and Lang U.S. 5,057932.

3. As to DeBey, I understand that the described receiver is shown in Fig. 1 at 22A, 22B, and is also shown in the lower portion of Fig. 2 at 40 and Figs. 3 and 4.

4. Much of the DeBey disclosure is of a head end scheduling system for cable TV. The DeBey receiver is hard to characterize. I believe that nothing like it now or was ever on the market. It is intended for storing television transmitted from the head end over a cable television system. The receiver's very limited storage capability is in the capture memory 46 and the buffer memory 42 of Fig. 2.

5. Figs. 3 and 4 show operation of the DeBey receiver and make it clear that the subscriber requests a particular program from the head end and determines if that program is currently being transmitted. The DeBey receiver has a capability to store segments or parts of a single television program. See DeBey page 10, line 34 carrying over to page 11, line 1. The video segments referred to in this passage are apparently data packets, each being very short such as 1/12 of a program, see page 13, lines 31-34. This is emphasized by the description of these being stored in "buffer memory 42." Buffer memories typically store small amounts of information. See also, DeBey page 11, lines 12 through 15 describing how compressed video data packets are first captured in capture memory 46 and then stored in buffer memory 42. From this I understand that the storage capacity of capture memory 46 is likely even less than that of buffer memory 42.

6. The DeBey receiver also is capable of storing one packet of each of, for instance, up to ten programs. See DeBey page 17, lines 12 through 26. Again, each of these packets is a brief part of a program.

7. I understand that the goal in DeBey is that one can view a currently transmitted program without waiting for the entire program to be transmitted. This is why one would store,

for instance, the first packet of each of ten programs as disclosed at page 17. It is also why the receiver has the buffer memory storage (see page 11) so as to not have to wait for transmission of the first packet of a program.

8. In either case, however, in DeBey there is no apparent capability of storing an entire program, or even a significant part of a program. Moreover, there is no description of the user selecting any particular program to retrieve from storage in the receiver. Instead the user orders a particular program to be transmitted to him from the head end, and only a small part of that single program is stored and replayed at the receiver.

9. Therefore, DeBey has no description of anything like a database at the receiver. There is no menu to be used by the user to select particular items. There is no set of menus. There is no use of menus to retrieve items from the memory in the receiver.

10. There is no suggestion in DeBey to modify the receiver to provide storage of multiple programs, or menus, or retrieval of programs or program items using menus or even one menu.

11. It is my understanding in the fields of video, television, and telecommunications, that the terms "database" and "menu" and "menus" indeed refer to structures and have meanings well understood by those skilled in these fields.

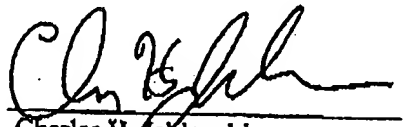
12. With regard to Lang, I make similar conclusions as pertain to DeBey. Lang has no relevant menu, set of menus, or database. Lang is a modified video cassette recorder (VCR). Like most consumer-type video cassette recorders it includes a television tuner. It also has some additional capabilities in terms of editing and copying. It also has some capability of operating in the digital realm in terms of manipulating the stored video. Lang only mentions a "menu" at

col. 6, lines 63-68 to select a desired "frame number." This is not a menu that describes the content of stored data, but only a reference to a serial frame number.

13. There is no description in Lang of replay of stored programs other than the conventional type video cassette recorder replay. There is no database disclosed in Lang, no menu to select programs, no set of menus, and no selection from the stored programs using a menu or set of menus.

14. There is no suggestion in Lang to modify the Lang VCR to provide a database, a program menu or set of menus, or to select from the stored programs using a menu or menus.

15. I understand that willful false statements and the like in this declaration are punishable by fine or imprisonment, or both (18 U.S.C. § 1001) and may jeopardize the validity of the above cited application or any patent issuing thereon. All statements made in this declaration of my own knowledge are true and all statements made on information and belief are believed to be true.

Signed: 

Charles H. Jablonski

Date: 3-Mar-06

"EXHIBIT 1"

Charles H. Jablonski
578 Edgewood Road
Redwood City, CA 94062
cjablonski@mindspring.com
(650) 299-9309

Position Objective: Senior Operating and Executive Management Role in fast growth technology, media, communications business.

Experience Summary:
November 2002-Present Board, Advisory & Management Services Currently serving on three (one public) Boards of Directors, several advisory boards, various advisory and consulting engagements and participant in and developer of various acquisition and restructuring proposals.

June 2001-October 2002 President & CEO Myrio Corporation (Interim) Recruited as interim CEO by investors/Board to focus business, reduce costs and structure business for survivability until profitability. Raised $16MM in funding from existing investors, reduced staff and costs significantly, continued product evolution and instituted processes and procedures for stability and growth based on market. Closed significant domestic and international sales.

October 2000-End Chief Operating Officer, Geocast Network Systems Overall operational responsibility for startup including engineering, product development, customer development, finance, marketing, HR, and operations. Wound down business in 2nd Q 2001; negotiated sales of IP, orderly termination of business activities and asset distribution.

July 1999-October 2000Senior Vice President Network Operations and Engineering, Geocast Network Systems Responsible for design, procurement and implementation of end-to-end data broadcast network for affiliate sites, implementation and operation of Network Operating Center. Responsibilities also included commercial operations, program and product management and IS.

February 1993-July 1999 Vice President Broadcast & Network Engineering National Broadcasting Company Complete technical and technology responsibility for all aspects of NBC, including Olympics, Owned Stations, International, Network Distribution from the strategic to the implementation and operational units. Additionally included business development and acquisitions, strategic technology assessment and development at Senior Management, GE Capital and Corporate (GE) level.

July 1983-February 1993 Managing Director, Chief Engineer, Director National Broadcasting Company Responsibilities ranged from Managing Director Engineering for two Olympic Games (Seoul and Barcelona), Chief Engineer for the Network, capital and strategic planning, and various fast track technology projects from conversion electronic graphics to conversion to stereo for which NBC was awarded an Engineering Emmy.

Professional Societies, Associations & Awards:
Society of Motion Picture and Television Engineers: Fellow, Served as President 1999-2000
Member: IEEE, Royal Television Society, BKSTS, and NATAS
Serves on Advisory Board for RPI (Rensselaer Polytechnic Institute) School of Engineering
Chair NATAS (Emmy) Engineering Achievement Award Committee
Presented Royal Television Society Schoenberg Lecture, London, November 1999
Various Papers and Presentations over the past two decades at various conferences, seminars and associations.
Awarded Three Emmys
Featured as one of the "10 to Watch" Electronic Media 1999

Education:
Rensselaer Polytechnic Institute-Electrical Engineering Union College-Electrical Engineering

COPY

Docket No.: 549222000101
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
John O. RYAN

Application No.: 08/977,846 Confirmation No.: 3572

Filed: (Intl.) November 25, 1997 Art Unit: 3639

For: METHOD AND SYSTEM FOR INFORMATION DISSEMINATION WITH USER MENU INTERFACE Examiner: M. Dinh

SECOND DECLARATION UNDER RULE 132

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

1. My name is Charles H. Jablonski. My qualifications are attached as Exhibit 2. I am an independent consultant.

2. I reviewed the specification and currently pending claims of U.S. Patent Application No. 08/977,846 filed November 25, 1997 titled "Method and System for Information Dissemination with User Menu Interface," inventor John O. Ryan. I also reviewed the Office Action in that application having a mailing date of December 13, 2005 and the cited reference assigned to Hitachi Limited, inventor Yoshio et al., Japanese Patent Application No. 04-310631. I reviewed an English language translation of Yoshio et al. I note that in the December 13, 2005

Office Action the Examiner referred to this reference erroneously as "Yoshiro et al. ('631)." The last name of the first inventor is "Yoshio."

3. The disclosure of Yoshio et al. is limited. There is disclosure of how the user would use the apparatus, referred to as a "rewritable optical disc." However, there is no useful description of how the apparatus is built or its internal operation.

4. There is no description in Yoshio et al of internal components and how they are interrelated or operation of the rewritable optical disc apparatus. The exception is that the apparatus is described as based on an optical recording disc drive and having the capability of receiving a television signal. There is no description in Yoshio et al of how the data is indexed or cataloged for recordation or storage on the disc, or how the apparatus processes the received data for such storage. This is not enough for one of ordinary skill in the television/video field to understand how the apparatus would actually be built or operate.

5. Yoshio et al is only an unexamined Japanese patent publication ("Kokai"). It is not an issued patent.

6. In my professional activities I have reviewed many patents and technical articles and technical specifications in the video and television and telecommunications fields. The specification of Yoshio et al. is remarkably sketchy in terms of technical detail of how the apparatus would be implemented. I view the Yoshio et al description as more of a wish list of what a desired apparatus would do rather than a description of how to make and use such an apparatus.

7. I believe that the Yoshio et al description, even to one of ordinary skill in the relevant technical field, which I believe is television and/or video and/or telecommunications, is insufficient to enable such a person to make or use the apparatus, even with some experimentation.

8. I understand that willful false statements and the like in this declaration are punishable by fine or imprisonment, or both (18 U.S.C. § 1001) and may jeopardize the validity of the above cited application or any patent issuing thereon. All statements made in this declaration of my own knowledge are true and all statements made on information and belief are believed to be true.

Signed: _____
Charles H. Jablonski

Date: 3-MAR-06

"EXHIBIT 2"

Charles H. Jablonski
578 Edgewood Road
Redwood City, CA 94062
cjablonski@mindspring.com
(650) 299-9309

Position Objective: Senior Operating and Executive Management Role in fast growth technology, media, communications business.

Experience Summary:
November 2002-Present Board, Advisory & Management Services Currently serving on three (one public) Boards of Directors, several advisory boards, various advisory and consulting engagements and participant in and developer of various acquisition and restructuring proposals.

June 2001-October 2002 President & CEO Myrio Corporation (Interim) Recruited as interim CEO by investors/Board to focus business, reduce costs and structure business for survivability until profitability. Raised $16MM in funding from existing investors, reduced staff and costs significantly, continued product evolution and instituted processes and procedures for stability and growth based on market. Closed significant domestic and international sales.

October 2000-End Chief Operating Officer, Geocast Network Systems Overall operational responsibility for startup including engineering, product development, customer development, finance, marketing, HR, and operations. Wound down business in 2nd Q 2001; negotiated sales of IP, orderly termination of business activities and asset distribution.

July 1999-October 2000 Senior Vice President Network Operations and Engineering, Geocast Network Systems Responsible for design, procurement and implementation of end-to-end data broadcast network for affiliate sites, implementation and operation of Network Operating Center. Responsibilities also included commercial operations, program and product management and IS.

February 1993-July 1999 Vice President Broadcast & Network Engineering National Broadcasting Company Complete technical and technology responsibility for all aspects of NBC, including Olympics, Owned Stations, International, Network Distribution from the strategic to the implementation and operational units. Additionally included business development and acquisitions, strategic technology assessment and development at Senior Management, GE Capital and Corporate (GE) level.

July 1983-February 1993 Managing Director, Chief Engineer, Director National Broadcasting Company Responsibilities ranged from Managing Director Engineering for two Olympic Games (Seoul and Barcelona), Chief Engineer for the Network, capital and strategic planning, and various fast track technology projects from conversion electronic graphics to conversion to stereo for which NBC was awarded an Engineering Emmy.

Professional Societies, Associations & Awards:
Society of Motion Picture and Television Engineers: Fellow, Served as President 1999-2000
Member: IEEE, Royal Television Society, BKSTS, and NATAS
Serves on Advisory Board for RPI (Rensselaer Polytechnic Institute) School of Engineering
Chair NATAS (Emmy) Engineering Achievement Award Committee
Presented Royal Television Society Schoenberg Lecture, London, November 1999
Various Papers and Presentations over the past two decades at various conferences, seminars and associations.
Awarded Three Emmys
Featured as one of the "10 to Watch" Electronic Media 1999

Education:
Rensselaer Polytechnic Institute-Electrical Engineering Union College-Electrical Engineering